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ABSTRACT

With the increasing emphasis by legislators on accountability in higher education, the economic contributions of higher education to the local, regional, and state economies tend to be overlooked. This study provides estimates of both the gross and net impacts of Miami-Dade Community College (MDCC) on the local Dade County economy. All categories of expenditures are included, and data are for the fiscal year 1994-95. The results of this study are intended to inform planning and decision-making. Some findings include: (1) total gross county expenditures were $360.6 million; (2) output of additional goods and services was $367.6 million; (3) added income earned by local households was $257.7 million; and (4) total jobs created were 14,205. Tables of data are provided on gross and net impacts, personnel costs, current expenses, capital outlay, plant fund operations, enrollment, graduates and leavers, transfers, and sources of revenue. Appended are gross and net county expenditures by the college and employees, by students and visitors, and by graduates; and a glossary. (Contains 28 references) (EMH)

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ED 422 997

THE ECONOMIC IMPACT OF MIAMI-DADE COMMUNITY COLLEGE ON THE LOCAL DADE COUNTY ECONOMY

Research Report No. 97-07R

June 1997

Institutional Research

JC 980 391

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Miami-Dade Community College

THE ECONOMIC IMPACT OF MIAMI-DADE COMMUNITY COLLEGE ON THE LOCAL DADE COUNTY ECONOMY

Research Report No. 97-07R

June 1997

Herman I. Brann
Senior Research Associate

Anne Baldwin
Research Associate

Miami-Dade Community College

INSTITUTIONAL RESEARCH

Cathy Morris, Dean

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EXECUTIVE SUMMARY

The paper entitled "Economic Impact of Miami-Dade Community College on the Local Dade County Economy" was initially presented in 1997 to the 37th annual national forum of the Association for Institutional Research. Economic impact studies attempt to measure the impact of the expenditures of an institution on output, incomes, and employment in a specific geographic area. The geographic area may be national, regional, state or local (usually county). The larger the geographic area, the larger the economic impact. For colleges and universities, the main categories of expenditures are the college and its employees, students, visitors, and graduates. The more inclusive the expenditure categories, the greater the economic impact.

Economic impact studies usually measure either the gross impact, i.e., the impact of expenditures of all sources of funds in the geographic area of interest, or the net impact, i.e., the impact of expenditures of funds originating outside the area of interest only. Obviously, gross impact estimates will be larger than net impact estimates; however, both concepts are valid since each dollar of expenditure contributes to economic impact regardless of its origin.

In comparing and interpreting economic impact studies, therefore, three questions must be considered: (1) the geographic area of interest, (2) the categories of expenditures included, and (3) the level of impact -- gross versus net impact. This study provides estimates of both the gross and net impacts of Miami-Dade Community College on the local Dade County economy. All categories of expenditures – the college and its employees, students, visitors, and graduates -- are included. Direct expenditures initiate indirect expenditures. In the vernacular, "It takes money to make more money."

Results of the study are intended to inform planning and decision-making. This report gives conservative estimates of the economic contributions of M-DCC to the local economy. Details that place this evolutionary model into historical context, the methodology employed, and technical analyses can be found in the full report. Data are for the fiscal year 1994-95. Some findings follow:

Primary Impact (Direct Effect or Gross County Expenditures)	
College Expenditures	$ 208.6 million
Student Expenditures	$ 114.1 million
Visitor Expenditures	$ 1.6 million
Graduates Expenditures	$ 36.3 million
Total Gross County Expenditures	**$ 360.6 million**
Secondary Impact (indirect Effect of Gross County Expenditures)	
Output of additional goods and services	**$ 367.6 million**
Total Expenditures Impact	**$ 728.2 million**
Added Income earned by local households	**$ 257.7 million**
Total jobs created	**14,205 jobs**

ABSTRACT

With the increasing emphasis by legislators on accountability in higher education, the economic contributions of higher education to the local, regional and state economies tend to be overlooked. This report provides conservative estimates of the economic contributions of Miami-Dade Community College (M-DCC) to the local Dade County economy.

One of the main objectives of this paper was to develop a model to estimate, simultaneously and separately, the gross and net economic impacts associated with the studies by Caffrey and Isaacs (1971) and Elliot, Levin and Meisel (1988). In doing so, the authors utilized a model which was reversible, and could therefore estimate the negative economic impacts associated with cutbacks in general college funding, or specific program funding. Accordingly, this model will be a useful tool to inform legislators, local leaders, and the general public of the wider implications of cutbacks in higher education funding on local incomes and employment, and the specific contributions of local funds to local economic development. This model also lends itself to spreadsheet analysis and simulations.

The gross and net impacts on the output of goods and services, incomes earned by local households, and employment in the local economy were estimated for all expenditures directly associated with the activities of M-DCC. Gross County Impact was defined as the impact of **all** expenditures by the college, students, visitors and graduates in the **local** economy. Gross County Impact approximates the impact concept estimated by Caffrey and Isaacs (1971). Net County Impact was defined as the local impact of expenditures originating outside of Dade County. Net County Impact approximates the impact concept estimated by Elliot, Levin and Meisel (1988). Therefore, the difference between Gross and Net County Impact represents the local impact of expenditures originating within Dade County. This impact was also estimated.

During the fiscal year 1994-95, M-DCC leveraged $146.7 million in state revenues to attract an additional $145.1 million in revenues from other federal, local and private sources, giving a total revenue of $291.8 million from all sources. Therefore, each dollar of state support was equally matched by support from other sources. Expenditures by the college, students, visitors and graduates were estimated at $450.6 million. Actual expenditures by the college alone were $298.6 million or 66 percent, student expenditures were estimated at $114.1 million or 25 percent, expenditures by graduates were estimated at $36.3 million or 8 percent, and visitor expenditures were estimated at $1.6 million or 0.4 percent.

M-DCC's Impact on Local Output

Gross County Expenditures were estimated at $360.6 million or 80 percent of Gross Actual Expenditures. The Gross County Impact on the output of goods and services was estimated at $728.2 million; therefore, an additional $367.6 million of output were added to the local economy as a result of activities indirectly associated with M-DCC.

Net County Expenditures, i.e., the expenditures of funds originating outside of Dade County, were estimated at $168.3 million, with a Net County Impact of $360.9 million. Therefore, the additional indirect impact associated with external sources of funds was $192.6 million. Expenditures from external sources of funds accounted for 46.7% of Gross County Expenditures

Expenditures of local sources of funds were estimated at $192.3 million, with an impact of $367.3 million. Therefore, the additional indirect impact associated with local sources of funds was $175.0 million. Expenditures from local sources of funds accounted for 53.3% of Gross County Expenditures

M-DCC's Impact on Local Incomes

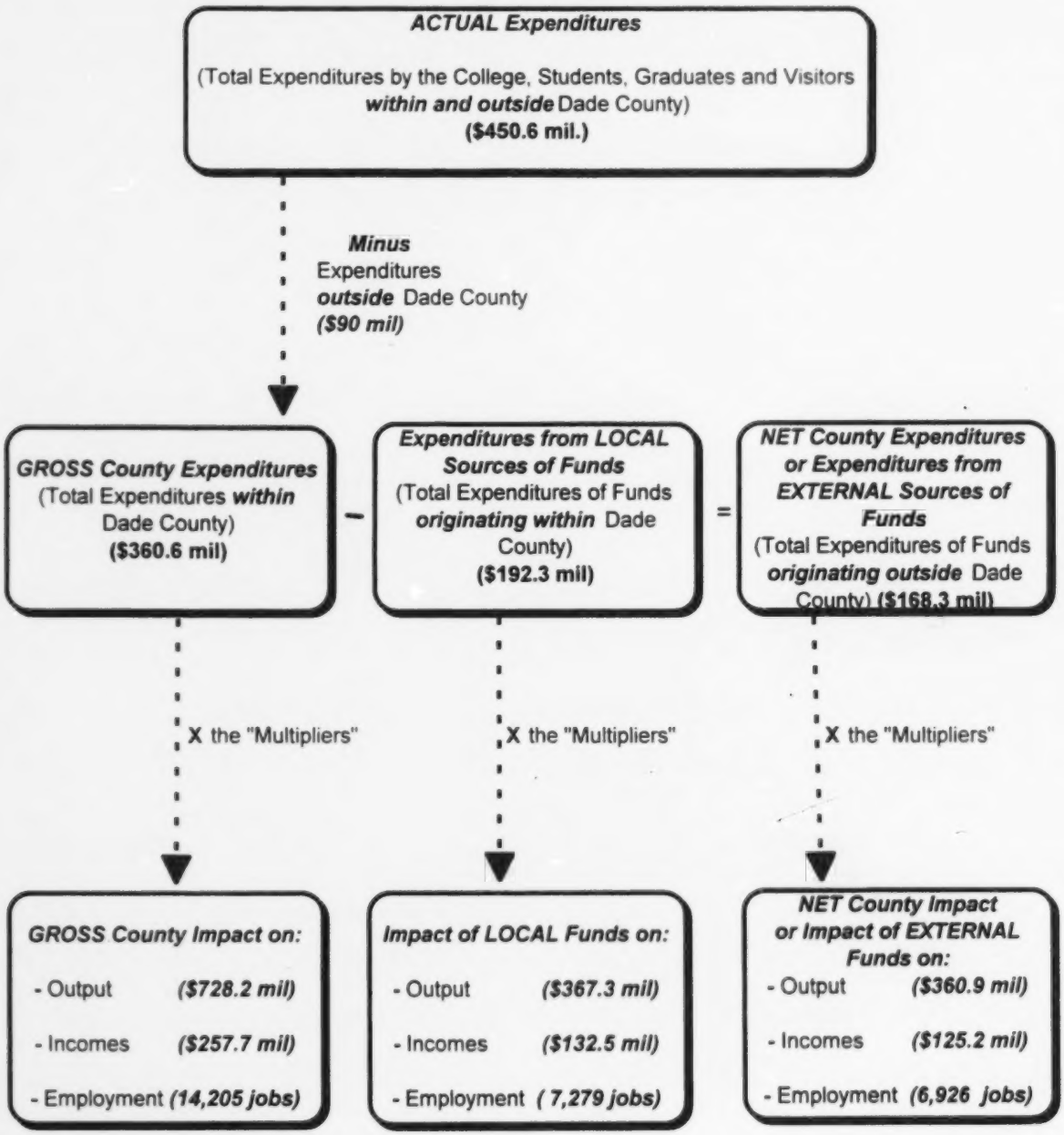
The $360.6 million in Gross County Expenditures generated $257.7 million in incomes earned by households in Dade County. External sources of funds accounted for $125.2 million in incomes to local households, while local sources of funds accounted for $132.5 million in incomes to local households.

M-DCC's Impact on Local Employment

M-DCC employed the equivalent of 4,450 full-time employees during the academic year 1994-95. The $360.6 million in Gross County Expenditures supported 14,205 full-time equivalent jobs in the Dade County Economy; therefore, an additional 9,755 jobs were generated by M-DCC's activities. Of the 14,205 jobs associated with M-DCC's activities, 6,926 were supported by external sources of funds, while 7,279 were supported by local sources of funds.

A Flowchart summarizing M-DCC-related expenditures and associated economic impact on Dade County is presented on the following page.

FLOWCHART OF M-DCC-RELATED EXPENDITURES AND ASSOCIATED ECONOMIC IMPACTS ON DADE COUNTY


ACTUAL Expenditures
(Total Expenditures by the College, Students, Graduates and Visitors within and outside Dade County)
($450.6 mil.)
Minus
Expenditures
outside Dade County
($90 mil)
GROSS County Expenditures
(Total Expenditures within Dade County)
($360.6 mil)
–
Expenditures from LOCAL Sources of Funds
(Total Expenditures of Funds originating within Dade County)
($192.3 mil)
=
NET County Expenditures or Expenditures from EXTERNAL Sources of Funds
(Total Expenditures of Funds originating outside Dade County) ($168.3 mil)
X the "Multipliers"
X the "Multipliers"
X the "Multipliers"
GROSS County Impact on:
- Output ($728.2 mil)
- Incomes ($257.7 mil)
- Employment (14,205 jobs)
Impact of LOCAL Funds on:
- Output ($367.3 mil)
- Incomes ($132.5 mil)
- Employment (7,279 jobs)
NET County Impact or Impact of EXTERNAL Funds on:
- Output ($360.9 mil)
- Incomes ($125.2 mil)
- Employment (6,926 jobs)

THE ECONOMIC IMPACT OF MIAMI-DADE COMMUNITY COLLEGE ON THE LOCAL DADE COUNTY ECONOMY

Introduction

With the increasing emphasis by legislators on accountability in higher education, the economic contributions of higher education to state and local economies tend to be overlooked. This report provides a spreadsheet model to derive estimates of the economic contributions of Miami-Dade Community College (M-DCC) to the local Dade County economy. This model can also be used to estimate the negative impacts of funding cutbacks on the local and state economies, and should be a useful tool to inform legislators, local leaders and the general public of the wider impact of funding cutbacks on local incomes and employment.

Expenditures associated with the activities of M-DCC have both a direct (primary) impact and an indirect (secondary) impact on the level of economic activity in the county. The total value of the direct impact can be estimated by measuring the total spending by: (i) the college, (ii) the employees, (iii) the students, (iv) the visitors to the college, and (v) the graduates of the college during the period under study.

The indirect impact associated with the direct spending provides an additional boost to economic activity in the county. For example, purchases made by the college from local suppliers will be replenished, eventually, by these suppliers making further purchases from other suppliers. Therefore, the initial direct spending by the college will have a multiplied effect on the output of goods and services in the county, and consequently, on the levels of employment and incomes. The total value of the indirect impact on output, incomes and employment can be estimated by multiplying the specific types of direct spending by the "multipliers" associated with each type. These multipliers are derived and published by the U.S. Department of Commerce and other research institutions for different regions and states in the U.S.A.

Economic impact analyses of colleges and universities are usually conducted at the regional, state or local (county) levels. The larger the geographic area, the larger the impact; therefore, three items must be clarified when comparing economic impact analyses: (1) the geographic area covered by the analysis – regional, state or local; (2) the major categories of spending included in the analysis – the institution, the employees, the students, the visitors, and the graduates; and (3) the scope of the analysis – gross versus net impact. This study provides conservative estimates of the gross and net impacts of Miami-Dade Community College on the local, Dade County economy.

Alternative Concepts of Economic Impact

The procedure discussed above provides a simple and useful estimate of the **gross** contribution of the college to the local economy, and is based on the concept utilized by Caffrey and Isaacs, 1971. However, one may also be interested in the **net** contribution of the college to the local economy. To the extent that some of the revenues used to finance college expenditures may have originated locally, the concept of net impact attempts to measure the contribution of the college to the local economy, minus the impact of the college expenditures which originated from local sources. In other words, net impact attempts to measure the **additional** economic activity generated by the college, above and beyond the level of economic activity which would have occurred in its absence. This is the concept of economic impact utilized by Elliott, Levin and Meisel, 1988.

By definition, therefore, estimates of gross impact will be larger than those of net impact; however, both concepts provide useful information for planning, decision-making, and comparisons. Moreover, the difference between gross and net impact provides an estimate of the impact of resources originating locally. This information will be useful in comparing alternative uses for local resources.

Barry Bluestone (1993) provided an additional interpretation of economic impact. In his analysis of the net impact of the University of Massachusetts, Boston, Bluestone compared the present discounted value of the tax revenues associated with the future incomes of graduates with the cost of the state subsidy to educate these graduates. His findings revealed a revenue/cost ratio of 1.57; that is, for every $1.00 spent by the state, a return of $1.57 could be expected in personal income and sales taxes, yielding a rate of return of 8.9 percent to the state government. Bluestone concluded that this was significantly more than the state could expect to earn by investing in other long-term financial instruments.

Objectives

The main objectives of this paper are as follows:

1. To develop a simplified model to measure economic impact which can be easily replicated by the widest audience.

2. To develop a model which can be easily and frequently updated with the most current multipliers, while seeking an acceptable tradeoff between the amount of data and time required for analysis and the utility of the results.

3. To develop a model which measures, simultaneously, the gross and net impacts of previous models, thereby providing additional information for planning, decision-making, and meaningful comparisons.

Methodology

This study utilizes the model developed by the U.S. Department of Commerce which estimates economic impact by multiplying industry expenditures by the multipliers associated with each industry. Gross Impact, Net Impact, and the impact of resources originating locally are estimated separately, in order to provide more information for planning, decision-making, and meaningful comparisons.

Gross County Impact measures the **local** impact of **all** expenditures directly associated with the activities of M-DCC. Expenditures occurring outside the local economy are estimated and deducted from the actual gross expenditures (Appendices I, II and III). This gives an estimate of the Gross County Expenditures. Net County Impact measures the local impact of resources originating outside the local economy. Expenditures originating within the local economy are estimated and deducted from the Gross County Expenditures (Appendices IV and V). This gives an estimate of the Net County Expenditures. Gross and Net County Expenditures were then multiplied by their corresponding regional multipliers to yield the Gross and Net County Impacts. The impact of resources originating locally were also estimated.

Multipliers were supplied by the Bureau of Economic Analysis of the U.S. Department of Commerce, and are specific to the Palm Beach, Broward and Dade County region. The multipliers reflect the leakage of funds out of the region through taxes and savings, and the loss of earnings

resulting from individuals working in the region but residing outside the region. These multipliers are the most current multipliers available for the counties, regions, and states in the U.S. economy.

Three types of multipliers are utilized in this study -- output, income and employment multipliers. The output multiplier represents the total dollar change in output that occurs in all industries for each additional dollar of expenditure on the associated good or service. The income multiplier represents the total dollar change in the earnings of households employed by all industries for each additional dollar of expenditure on the associated good or service. The employment multiplier represents the total change in the number of jobs in all industries for each additional one million dollars of expenditures on the associated good or service. Industry codes for the multipliers used in this study are provided in Appendix Table VI.

Data on actual gross expenditures by M-DCC were derived from the Annual Financial Report of the college. In order to estimate student, visitor and graduate expenditures, data on student enrollment were collected from the Institutional Research Office, while data on student expenses were collected from the Office of Financial Aid and other sources. Graduate employment and earnings data were collected from the Florida Employment Training and Placement Information Program (FETPIP). A student survey is suggested to supplement the estimates of student and visitor expenditures.

M-DCC's Impact on Local Output

During the fiscal year 1994 to 1995, M-DCC received $291.8 million in revenues from a variety of sources (Appendix Table 4.1). State government provided $146.7 million or 50.3 percent for operations and capital projects. An additional $58.4 million or 20 percent came from student fees, while another $46.1 million or 15.8 percent came from the federal government. The balance came from endowment earnings, gifts, private grants and contracts $15.9 million or 5.4 percent; bookstore and food service sales $13.2 million or 4.5 percent; non-revenue receipts (transfers-in, sales of fixed assets) $7.9 million or 2.7 percent; and local government $3.6 million or 1.2 percent (Figure 1).

Gross Actual Expenditures by the college, students, visitors and graduates were estimated at $450.6 million (Table 1). Sixty-six percent (66%) of this amount or $298.6 million were spent by M-DCC for operating expenses, new construction, and major maintenance and repairs; 25% or $114.1 million were spent by students on activities directly associated with the college; 8.0% or $36.3 million were spent by graduates of M-DCC, and 0.4% or $1.6 million were spent by visitors to the college.

Gross County Expenditures were estimated at $360.6 million, or 80 percent of Gross Actual Expenditures. Given the output multipliers associated with each item of expenditure (Table 1), the Gross County Impact was estimated at $728.2 million. Therefore, the additional indirect impact on the output of goods and services in Dade County was estimated at $367.6 million.

Net County Expenditures, i.e., the expenditures of funds originating outside of Dade County, were estimated at $168.3 million, with a Net County Impact of $360.9 million. Therefore, the additional indirect impact of external funds on the output of goods and services in Dade County was $192.6 million. Expenditures from external sources of funds accounted for 46.7% of Gross County Expenditures.

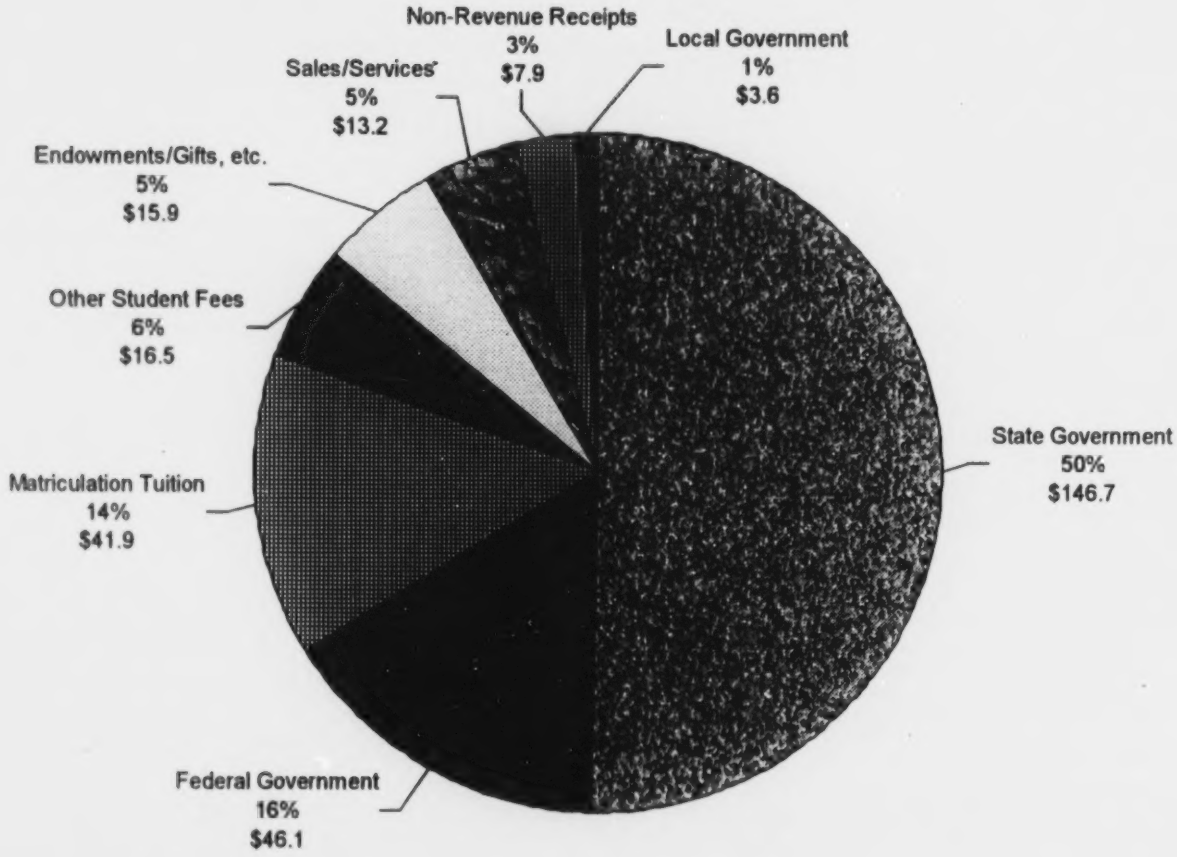
Expenditures from local sources of funds were estimated at $192.3 million, with an impact of $367.3 million. Therefore, the additional indirect impact of local sources of funds on the output of goods and services in Dade County was $175.0 million. Expenditures from local sources of funds accounted for 53.3% of Gross County Expenditures.

Figure 1

Sources and Amounts of Revenue

Miami-Dade Community College, 1994-95

(In millions of $)



Total revenues - $291.8 mil.

Table 1
Gross and Net Impacts on Output
Miami-Dade Community College, 1994-95
(In Millions of $)

Types of Expenditures	1992 Output Multipliers*	Gross Actual Expend.	Gross[1] County Expend.	Gross County Impact	Net[2] County Expend.	Net County Impact	Expend. From Local Funds	Impact of Local Funds
College Expenditures								
Personnel, Current & Capital Expenses[3]	2.2741	263.2	190.9	434.1	118.9	270.4	72.0	163.7
New Construction, Maintenance & Repairs	1.9549	35.4	17.7	34.6	17.7	34.6	0.0	0.0
Subtotal		**298.6**	**208.6**	**468.7**	**136.6**	**305.0**	**72.0**	**163.7**
Student Expenditures								
Books & Supplies	2.0109	20.9	20.9	42.0	1.3	2.6	19.6	39.4
Rental Real Estate	1.5433	24.1	24.1	37.2	14.9	23.0	9.2	14.2
Boarding, Eating, Drinking	1.8839	23.3	23.3	43.9	6.7	12.6	16.6	31.3
Transportation	1.9682	34.1	34.1	67.1	2.2	4.3	31.9	62.8
Personal								
Clothing/Toiletries	2.0109	2.9	2.9	5.8	2.9	5.8	0.0	0.0
Health Insurance	1.9666	0.9	0.9	1.8	0.9	1.8	0.0	0.0
Medical/Dental	2.0599	0.7	0.7	1.4	0.7	1.4	0.0	0.0
Entertainment	2.0437	7.2	7.2	14.7	0.5	1.0	6.7	13.7
Subtotal		**114.1**	**114.1**	**214.0**	**30.1**	**52.6**	**84.0**	**161.4**
Visitor Expenditures								
Hotel and Lodging	2.1185	0.6	0.6	1.3	0.6	1.3	0.0	0.0
Eating and Drinking	1.8839	0.3	0.3	0.6	0.3	0.6	0.0	0.0
Retail Services	2.0109	0.7	0.7	1.4	0.7	1.4	0.0	0.0
Subtotal		**1.6**	**1.6**	**3.2**	**1.6**	**3.3**	**0.0**	**0.0**
Graduates Expenditures[4]	1.1631	36.3	36.3	42.2	0.0	0.0	36.3	42.2
Subtotal		**36.3**	**36.3**	**42.2**	**0.0**	**0.0**	**36.3**	**42.2**
TOTAL		**450.6**	**360.6**	**728.2**	**168.3**	**360.9**	**192.3**	**367.3**

*Regional Multipliers for Dade, Broward, and Palm Beach Counties. The Output Multiplier represents the total dollar change in the output of all industries for each additional dollar of expenditure on the associated good or service.

[1] Gross Actual Expenditures minus funds not spent within Dade County (Appendices I, II and III).

[2] Gross County Expenditures minus funds originating within Dade County, i.e., expenditure of funds originating externally (Appendices IV and V).

[3] Excluding new construction, maintenance, & repairs.

[4] Considered as expenditures by households.

M-DCC's Impact on Local Incomes

As a result of the increased economic activity in the local economy, the initial $360.6 million of Gross County Expenditures were estimated to have generated $257.7 million in incomes earned by households in Dade County (Table 2). Net County Expenditures, the expenditure of funds originating externally, accounted for $125.2 million in incomes to local households, while the expenditure of funds originating locally accounted for $132.5 million in incomes to local households. Villamil (1996) points out that the income multipliers were constructed assuming that all capital incomes (profits) did not stay in Dade County; therefore, the income estimates were on the low side.

M-DCC's Impact on Local Employment

There were nearly 2,700 full-time employees and 3,500 part-time employees at M-DCC during the academic year 1994-1995 (M-DCC Fact Book, 1994-95). Assuming that the average part-time employee was employed half time, it is estimated that 4,450 full-time equivalent employees were supported by M-DCC during 1994-95.

The $360.6 million of Gross County Expenditures were estimated to have generated 14,205 full time equivalent jobs in the Dade County economy, given the employment multipliers in Table 3. Therefore, the additional indirect impact on employment was 9,755 jobs. Net County Expenditures, expenditures originating externally, supported 6,926 jobs, while expenditures from local sources supported 7,279 jobs.

Table 2
Gross and Net Impacts on Income
Miami-Dade Community College, 1994-95
(In Millions of $)

Types of Expenditures	1992 Income Multipliers*	Gross Actual Expend.	Gross[1] County Expend.	Gross County Impact	Net[2] County Expend.	Net County Impact	Expend. From Local Funds	Impact of Local Funds
College Expenditures								
Personnel, Current & Capital Expenses[3]	0.8427	263.2	190.9	160.9	118.9	100.2	72.0	60.7
New Construction, Maintenance & Repairs	0.6108	35.4	17.7	10.8	17.7	10.8	0.0	0.0
Subtotal		**298.6**	**208.6**	**171.7**	**136.6**	**111.0**	**72.0**	**60.7**
Student Expenditures								
Books & Supplies	0.7547	20.9	20.9	15.8	1.3	1.0	19.6	14.8
Rental Real Estate	0.1960	24.1	24.1	4.7	14.9	2.9	9.2	1.8
Boarding, Eating, Drinking	0.5877	23.3	23.3	13.7	6.7	3.9	16.6	9.8
Transportation	0.8784	34.1	34.1	30.0	2.2	1.9	31.9	28.0
Personal								
Clothing/Toiletries	0.7547	2.9	2.9	2.2	2.9	2.2	0.0	0.0
Health Insurance	0.2282	0.9	0.9	0.2	0.9	0.2	0.0	0.0
Medical/Dental	0.8688	0.7	0.7	0.6	0.7	0.6	0.0	0.0
Entertainment	0.6388	7.2	7.2	4.6	0.5	0.3	6.7	4.3
Subtotal		**114.1**	**114.1**	**71.7**	**30.1**	**13.1**	**84.0**	**58.7**
Visitor Expenditures								
Hotel and Lodging	0.7342	0.6	0.6	0.4	0.6	0.4	0.0	0.0
Eating and Drinking	0.5877	0.3	0.3	0.2	0.3	0.2	0.0	0.0
Retail Services	0.7547	0.7	0.7	0.5	0.7	0.5	0.0	0.0
Subtotal		**1.6**	**1.6**	**1.1**	**1.6**	**1.1**	**0.0**	**0.0**
Graduate Expenditures[4]	0.3611	36.3	36.3	13.1	0.0	0.0	36.3	13.1
Subtotal		**36.3**	**36.3**	**13.1**	**0.0**	**0.0**	**36.3**	**13.1**
TOTAL		**450.6**	**360.6**	**257.7**	**168.3**	**125.2**	**192.3**	**132.5**

*Regional Multipliers for Dade, Broward, and Palm Beach. The Income Multiplier represents the total dollar change in the earnings of households employed by all industries for each additional dollar of expenditure on the associated good or service.

[1]Gross Actual Expenditures minus funds not spent within Dade County (Appendices I, II and III).

[2]Gross County Expenditures minus funds originating within Dade County, i.e., expenditure of funds originating externally (Appendices IV and V).

[3]Excluding new construction, maintenance, and repairs.

[4]Considered as expenditures by households.

Table 3

Gross and Net Impacts on Employment
Miami-Dade Community College, 1994-95

(Number of Jobs)

Types of Expenditures	1992 Employment Multipliers*	Gross Actual Expend.	Gross[1] County Expend.	Gross County Impact	Net[2] County Expend.	Net County Impact	Expend. From Local Funds	Impact of Local Funds
College Expenditures								
Personnel, Current & Capital Expenses[3]	46.5	263.2	190.9	8,877	118.9	5,529	72.0	3,348
New Construction, Maintenance & Repairs	29.3	35.4	17.7	519	17.7	519	0.0	0
Subtotal		**298.6**	**208.6**	**9,396**	**136.6**	**6,048**	**72.0**	**3,348**
Student Expenditures								
Books & Supplies	44.6	20.9	20.9	932	1.3	58	19.6	874
Rental Real Estate	12.0	24.1	24.1	289	14.9	179	9.2	110
Boarding, Eating, Drinking	42.2	23.3	23.3	983	6.7	283	16.6	701
Transportation	42.2	34.1	34.1	1,439	2.2	93	31.9	1,346
Personal								
Clothing/Toiletries	44.6	2.9	2.9	129	2.9	129	0.0	0
Health Insurance	34.6	0.9	0.9	31	0.9	31	0.0	0
Medical/Dental	26.5	0.7	0.7	19	0.7	19	0.0	0
Entertainment	36.8	7.2	7.2	265	0.5	18	6.7	247
Subtotal		**114.1**	**114.1**	**4,088**	**30.1**	**810**	**84.0**	**3,278**
Visitor Expenditures								
Hotel and Lodging	40.0	0.6	0.6	24	0.6	24	0.0	0
Eating and Drinking	42.2	0.3	0.3	13	0.3	13	0.0	0
Retail Services	44.6	0.7	0.7	31	0.7	31	0.0	0
Subtotal		**1.6**	**1.6**	**68**	**1.6**	**68**	**0.0**	**0**
Graduate Expenditures[4]	18.0	36.3	36.3	653	0.0	0	36.3	653
Subtotal		**36.3**	**36.3**	**653**	**0.0**	**0**	**36.3**	**653**
TOTAL		**450.6**	**360.6**	**14,205**	**168.3**	**6,926**	**192.3**	**7,279**

*Regional Multipliers for Dade, Broward, and Palm Beach Counties. The Employment Multiplier represents the total change in the number of jobs in all industries for each additional one million dollars of expenditure on the associated good or service.

[1] Gross Actual expenditure minus funds not spent within Dade County (Appendices I, II and III).

[2] Gross County Expenditures minus funds originating within Dade County, i.e., expenditure of funds originating externally (Appendices IV and V).

[3] Excluding new construction, maintenance, and repairs.

[4] Considered as expenditures by households.

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Appendix I

Gross County Expenditures by the College and Employees

Estimates of Gross County Expenditures by the College were derived using the following formula:

Gross County Expenditures	**=**	***Gross Actual Expenditures***	**—** ***Non-Local College and Employee Expenditures***

Gross Actual Expenditure data were provided in Schedules 1 and 6-C of the 1994-95 Annual Financial Report. Schedule 1 provides data on Personnel, Current and Capital Outlay Expenses, while Schedule 6-C provides data on New Construction, Maintenance and Repairs. Copies of these schedules are attached to Appendix I. Non-Local College and Employee Expenditure estimates are provided below:

Non-Local College and Employee Expenditures

1. Non-Local College Expenditures

(i) Personnel Expenditures (in millions) (Schedule 1, p.12)

- Social Security Contributions ..... $ 7.1
- Medicare Social Security Contributions Part-Time 1.6
- State Retirement Contributions 17.9

Non-Local Personnel Total ..... $ 26.6

(ii) Current Expenditures (in millions) (Schedule 1, p. 13)

- Property Insurance ..... $ 2.5
- Educational/Office Materials & Supplies (@ 50%)* 1.2
- Data Software (@50%)* 0.2
- Maintenance/Constructions Materials & Supplies (@ 50%)* 0.7
- Subscriptions/Periodicals 0.1
- Purchases for Resale (Bookstore) 9.1

Non-Local Current Total ..... $ 13.8

Schedule 1 is referred to as the "Schedule of Revenue, Expenditure and Fund Balance by General Ledger Code," while Schedule 6-C is referred to as the "Summary of Plant Fund Operations."

*The Business Affairs Office at M-DCC estimates that about 50% of these purchases occur outside of Dade County.

(iii) Total Capital Outlay Expenditures (in millions) (Schedule 1, p.14).....52.4

- Less New Construction, Maintenance & Repairs[1] 35.4
  (Schedule 6-C, p.15)
- Balance of Capital Outlay.....17.0
- Non-Local Capital Outlay Expenses @ 50% of Balance 8.5

Non-Local Capital Outlay Total $8.5
(Excluding New Construction, Maintenance & Repairs)

(iv) State/Federal Taxes Paid by the College.....0.0

Non-Local College Expenditures Total $48.9
(Excluding New Construction, Maintenance & Repairs)

2. ***Non-Local Employee Expenditures and Other Leakages***

- Non-Resident Employee Costs @ 10% of Local Personnel Costs[2].....13.1

- Non-Local Purchases by Resident Employees @ 10% of Resident Employee Expenditures[3].....10.3

- Personal Taxes & Savings (Reflected in the Multipliers)

Non-Local Employee Expenditures Total $23.4

Non-Local College/Employee Expenditures Total.....$72.3
(Excluding New Construction, Maintenance & Repairs)

3. **Non-Local Expenditures for New Construction, Maintenance & Repairs**

- Non-Local Expenditures for New Construction, Maintenance and Repairs @ 50% of Total New Construction Expenditures (i.e. 50% of $35.4% mil)

Non-Local New Construction Total $17.7

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[1] New construction is separated from other Capital Outlay Expenses because the Multiplier effect is different.

[2] Local Personnel Costs ($130.5 mil) = Total Personnel Costs ($157.1 mil) – Non-Local Personal Costs ($26.6 mil). Therefore, Resident Employee Costs ($117.4 mil) = Local Personnel Costs ($130.5 mil) - Non-Resident Employee Costs ($13.1 mil). This study assumes that 10% of the employees lived outside Dade County. Previous studies assumed 15%.

[3] It is assumed that Resident Employee Costs ($117.4 mil) are equal to Resident Employee Incomes before taxes. Data from the 1994-95 Consumer Expenditure Survey reveal that average annual expenditures in Miami were 88.1% of average annual incomes before taxes (U.S. Department of Labor, 1977). Therefore, Resident Employee Expenditures are estimated at $103.4 mil.

The following relationships between Actual and County Expenditures can be derived:

(1) Gross Actual Expenditures (for Personnel, Current & Capital Outlay) **($263.2 mil)**	=	***Gross Actual Expenditures***[1] (by the College) **($298.6 mil)**	- ***Total New Construction Expenditures***[2] **($35.4 mil)**
(2)Gross COUNTY Expenditures (for Personnel, Current & Capital Outlay) **($190.9 mil)**	=	***Gross ACTUAL Expenditures*** (for Personnel, Current & Capital Outlay) **($263.2 mil)**	- ***Non-Local College & Employee Expenditures***[3] **($72.3 mil)**
(3) Gross COUNTY Expenditures (by the College) **($208.6 mil)**	=	***Gross COUNTY Expenditures*** (for Personnel, Current & Capital Outlay) **($190.9 mil)**	+ ***Local Expenditures for New Construction***[3] **($17.7 mil)**

[1] From Schedule 1 attached (p.14)

[2] From Schedule 6-C attached (p.15)

[3] From Estimates on previous page.

Schedule I

Personnel Costs, M-DCC
Fiscal Year 1994-95

COLLEGE: MIAMI-DADE COMMUNITY COLLEGE

SCHEDULE OF REVENUE, EXPENDITURES, AND FUND BALANCE
BY GENERAL LEDGER CODE
FOR THE FISCAL YEAR 1994-95

SCHEDULE I

ACCOUNT TITLE	GL CODE	CURRENT FUND UNRESTRICTED	CURRENT FUND RESTRICTED	AUXILIARY CURRENT	LOAN AND ENDOWMENT	SCHOLARSHIP RESTRICTED	UNEXPENDED PLANT	DEBT SERVICE	TOTAL ALL FUNDS
PERSONNEL COSTS									
EXECUTIVE, ADMINISTRATIVE, MANAGERIAL	51000	1,547,240							1,547,240
INSTRUCTIONAL/ADMINISTRATIVE,MANAGERIAL	51100	6,034,158	582						6,034,740
INSTITUTIONAL/ADMINISTRATIVE,MANAGERIAL	51200	2,809,565	550,465	70,407					3,430,437
EXECUTIVE, ADMINISTRATIVE, MANAGERIAL SABBAT.	51400								0
EXECUTIVE, ADMINISTRATIVE, MANAGERIAL PERM. P.T.	51500								0
INSTRUCTIONAL	52000	36,130,199	54,595						36,184,794
INSTRUCTIONAL - OVERLOAD	52100	5,590,422	9,448						5,599,870
INSTRUCTIONAL - SUBSTITUTION	52200	52,659							52,659
INSTRUCTIONAL - PARA-PROF/ASSOC/ASSIST	52300	2,679,366	217,421						2,896,787
INSTRUCTIONAL - SABBATICAL	52400								0
OTHER PROFESSIONAL	53000	16,002,322	1,444,112	407,827			461,787		17,318,048
OTHER PROFESSIONAL - OVERLOAD	53100	118,402	2,468						120,870
OTHER PROFESSIONAL - SUBSTITUTION	53200								0
OTHER PROFESSIONAL - PARA-PROF/ASSOC/ASSIST	53300	2,193,737	172,123						2,365,860
OTHER PROFESSIONAL - SABBATICAL	53400								0
OTHER PROFESSIONAL - PERMANENT PART-TIME	53500	929,568	265,252						1,194,810
TECHNICAL, CLERICAL, TRADE	54000	20,608,254	304,545	850,108	62,929		598,485		22,424,321
TECHNICAL, CLERICAL, TRADE - OVERTIME	54100	1,166,789	8,132	56,022	1,748		59,785		1,294,476
TECHNICAL, CLERICAL, TRADE - PERMANENT PART-TIME	54500	137,780	36,489	3,572			148,856		326,717
TECHNICAL, CLERICAL, TRADE - SABBATICAL	54600								0
CPS - EXECUTIVE, ADMINISTRATIVE, MANAGERIAL	55000								0
CPS- INSTRUCTIONAL	56000	5,918,132	7,732						5,925,864
CPS- INSTRUCTIONAL - INSTRUCTIONAL SUBSTITUTES	56100	2,315,435	66,543						2,381,978
CPS - OTHER PROFESSIONAL PART-TIME	56500	2,310,518	539,613	46,702					2,896,831
CPS - TECHNICAL, CLERICAL, TRADE	57000	3,666,039	3,078,033	396,079	7,517		1,890		7,171,558
STUDENT EMPLOYMENT	58000		87,236						87,236
STUDENT EMPLOYMENT - INSTITUTIONAL WORK STUDY	58100	236,210							236,210
STUDENT EMPLOYMENT - COLLEGE WORK STUDY	58200		2,849,640						2,849,640
STUDENT EMPLOYMENT - COLLEGE WORK EXPERIENCE	58300		32,069						32,069
EMPLOYEE AWARDS	58500								0
* SOCIAL SECURITY CONTRIBUTION	59100	6,669,916	268,003	137,751	12,036				7,087,705
* MEDICARE SOC. SEC. CONTR. - PART-TIME	59101	1,568,981							1,568,981
* STATE RETIREMENT CONTRIBUTION	59200	17,073,274	848,258	292,723	25,576				17,939,831
ACCRUED LEAVE (COMPENSATED ABSENCES)	59300	471,036	16,128						487,164
ACCRUED SEVERANCE PAY EXP	59400	863,672							863,672
OTHER BENEFITS - TAXABLE	59500								0
INSURANCE CONTRIBUTION	59700	7,037,760	13,323	6,321	278		7,639		7,067,341
MATRICULATION BENEFITS & REIMBURSEMENTS	59800	1,661	1,575						3,656
CONTINGENCY	59900								0
TOTAL PERSONNEL COSTS		143,298,532	10,383,885	2,069,512	110,084	0	1,278,452	0	157,120,465

* Non-Local Personnel Expenditures

Schedule 1

Current Expenses, M-DCC
Fiscal Year 1994-95

COLLEGE: MIAMI-DADE COMMUNITY COLLLEGE

SCHEDULE I

SCHEDULE OF REVENUE, EXPENDITURES, AND FUND BALANCE
BY GENERAL LEDGER CODE
FOR THE FISCAL YEAR 1994-95

ACCOUNT TITLE	GL CODE	CURRENT FUND UNRESTRICTED	CURRENT FUND RESTRICTED	AUXILIARY CURRENT	LOAN AND ENDOWMENT	SCHOLARSHIP RESTRICTED	UNEXPENDED PLANT	DEBT SERVICE	TOTAL ALL FUNDS
CURRENT EXPENSE									
TRAVEL	60500	1,323,509	199,879	37,294	904				1,561,586
FREIGHT/POSTAGE	61000	860,847	7,769	49,964					918,280
COMMUNICATIONS	61500	1,071,358	1,830						1,073,188
PRINTING	62000	1,169,774	78,400	22,189					1,270,363
REPAIRS & MAINTENANCE	62500	2,207,480	80,069	47,199					2,334,748
RENTALS	63000	1,536,363	35,919	14,689					1,586,971
* INSURANCE	63500	2,524,752	8,747						2,533,499
UTILITIES(NOT DESIGNATED BELOW)	64000								0
HEATING FUELS	64001	51,527							51,527
WATER & SEWER	64002	541,446							541,446
ELECTRICITY	64003	3,727,167							3,727,167
GARBAGE COLLECTION	64004	250,449							250,449
FUEL, VEHICULAR	64005	17,563							17,563
HAZARDOUS WASTE REMOVAL	64006								0
OTHER SERVICES	64500	3,663,006	1,389,831	491,779	79,929		37,978		5,662,522
PROFESSIONAL FEES	65000	1,418,147	542,179	2,920					1,963,246
* EDUCATIONAL & OFFICE MAT. & SUP.	65500	2,162,939	312,875	28,691					2,504,505
* DATA SOFTWARE - NON-CAPITALIZED	65700	322,762	131,304	1,002					455,068
* MAINTENANCE & CONSTRU. MAT. & SUP.	66000	1,474,395	16,547	3,873					1,494,815
OTHER MATERIALS & SUP.	66500	432,457	35,348	20,069					487,874
* SUBSCRIPTIONS & PERIODICALS	67000	134,859	2,478	2,497					139,834
* PURCHASES FOR RESALE	67500			9,066,826					9,066,826
INDIRECT COST EXPENSE	67600		113,443		266,653	188,628			568,724
SCHOLARSHIPS AND WAIVERS	68000	996,618	333,418	2,579		37,123,210			38,455,825
INTEREST ON DEBT	68500							691,397	691,397
PAYMENTS ON DEBT PRINCIPAL	69000				18,140			1,794,852	1,812,992
TRANSFERS OUT - MANDATORY	69100	1,101,838		63,813					1,165,651
TRANSFERS OUT - NON-MANDATORY	69200	14,374		1,070,658	5,806,992				6,892,022
OTHER CURRENT EXPENSE	69500	371,910	20,313	261,891	72,511				626,625
BAD DEBT EXPENSE	69501	267,614		18,097	599,040				885,751
INVENTORY LOSSES/WRITE OFFS	69502	157,163							157,163
UNEMPLOYMENT COMPENSATION	69503	127,920							127,920
UNINSURED LOSSES	69504	204,498		33,465					237,963
PRIOR YEAR CORRECTIONS	69600								0
CONTINGENCY	69900								0
TOTAL CURRENT EXPENSE		26,032,254	3,310,349	11,242,293	6,844,169	37,311,838	37,978	2,486,249	89,065,130

* Non-Local Current Expenditures

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COLLEGE: MIAMI-DADE COMMUNITY COLLLEGE

Capital Outlay, M-DCC
Fiscal Year 1994-95

SCHEDULE I

SCHEDULE OF REVENUE, EXPENDITURES, AND FUND BALANCE
BY GENERAL LEDGER CODE
FOR THE FISCAL YEAR 1994-95

ACCOUNT TITLE	GL CODE	CURRENT FUND UNRESTRICTED	CURRENT FUND RESTRICTED	AUXILIARY CURRENT	LOAN AND ENDOWMENT	SCHOLARSHIP RESTRICTED	UNEXPENDED PLANT	DEBT SERVICE	TOTAL ALL FUNDS
CAPITAL OUTLAY									
MINOR EQUIPMENT	70500	420,753	128,220	5,427	900		1,208,711		1,764,011
FURNITURE & EQUIPMENT	71000	2,562,892	2,831,668	34,192			7,693,787		13,122,559
DATA SOFTWARE	72000	278,204	192,146	88			160,396		630,834
LIBRARY BOOKS & FILMS	73000	190,989	243,607				110,363		544,959
BUILDINGS & FIXED EQUIPMENT	75000	166,425	854,612				35,303,458		36,124,495
NON-CAPITALIZED REPAIRS AND MAINTENANCE	76000						73,556		73,556
LAND	77000								0
OTHER STRUCTURES & IMPROVEMENTS	79000		137,430				10,862		148,292
CONTINGENCY	79900								0
TOTAL CAPITAL OUTLAY		3,619,263	3,987,703	39,707	900	0	44,781,133	0	52,409,705
TOTAL ALL EXPENDITURES		174,950,049	17,981,937	19,381,612	6,795,183	37,311,839	46,077,883	2,450,249	299,924,300

ACCOUNT TITLE	GL CODE	FUND BALANCE UNRESTRICTED CURRENT
RESERVED FOR ENCUMBRANCES	30100	1,923,126
RESERVED FOR TANGIBLE ASSETS	30200	
RESERVED FOR ACADEMIC IMPROVEMENT TRUST FUNDS	30300	
RESERVED FOR OTHER REQUIRED PURPOSES	30400	8,112,403
RESERVED FOR STAFF & PROGRAM DEVELOPMENT	30500	
RESERVED FOR STUDENT ACTIVITY FUNDS	30600	
RESERVED FOR M[illegible]NTS	30700	
UNALLOCATED	31100	[illegible]
TOTAL R[illegible]ALLOCATED FUND BALANCES		[illegible]
AMOUN[illegible]FINANCED IN FUTURE YEARS	30800	[illegible]
TOTA[illegible]		[illegible]

PRIOR YEAR 6-30 FUND BALANCE	(13,469,379)
AUDIT ADJUSTMENTS	
POST AUDIT PRIOR YEAR FUND BALANCE	(13,469,379)
GRAND TOTAL REVENUES	174,967,983
TOTAL FUNDS AVAILABLE	161,478,604
UNALLOCATED FUND BALANCE AS % OF TOTAL FUNDS AVAILABLE	3.27%

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Schedule 6-C

MIAMI-DADE COMMUNITY COLLEGE

SUMMARY OF PLANT FUND OPERATIONS
FOR THE YEAR ENDED JUNE 30, 1995

	Fund Balance 07/01/94	Receipts	EXPENDITURES						Fund Balance 06/30/95	
			Bond Admin.	Salary	Equipment	Building	Land	Improvement	Encumbered	Unencumbered
	$47,282,175	$41,590,935	$	$	$	$	$	$	$	$
C. Summary of Project:										
IAC						343,405			1,248,986	
Renovate & Remodel Medical					642,832	576,579			561,165	
Humanities/FineArts/Garage					246,126	7,275,426			10,810,876	
Safety to Life				44,068	167,726	383,693			133,855	
SDA Aviation Grant					3,906,983				1,379,316	
Remodel & Renovate Wolfson Campus					133,376	2,660,714		615	2,192,512	
Energy/HVAC						51,522			89,423	
Security Modifications					24,578	2,224			2,858	
Homestead Campus					478,101	8,564,415	5,563		3,324,263	
Remodel & Renovation North Campus					524,081	1,028,476			1,515,565	
Remodel & Renovate Kendall Campus					142,813	1,002,516			588,356	
Renovation Telephone System					119,489	2,360			8,607	
Roof Repairs						745,418			742,488	
Maintenance & Repairs					83,426	1,396,977		10,847	369,768	
Copy System North Campus					87,911					
DC Move 330 Biscayne					310	4,488			483	
Fire Safety/ADA						316,217			36,416	
Liberty City						24,040			4,843	
College Adm/HWBA-AT&T						110			7,917	
Special Approp/NC/CIP					147,539				126,652	
Special Approp/KC/CIP					309,754				35,697	
Special Approp/NC/CIP					23,774					
Special Approp/NC/CIP					69,837				3,880	
Special Approp/DC/CIP					314,078					
Wolfson Phse III					462,578	5,064,857			3,645,736	
Various Studies									4,361	
Remodel Renovate Collegewide				1,234,387	1,095,661	5,610,799			2,658,266	
Clsrm/Aud/StuSvc/Gar Medical						398,979			1,532,628	
SBE Bond Admin. Exp.			37,978							
Real Estate Fees							54,426			
Legal/Arch Fees						56,819			413	
Child Care/HC						7,981			160,105	
Mainframe Computer System					1,492,000					
TOTAL	$47,282,175	$41,590,935	$ 37,978	$1,278,452	$9,272,269	$35,410,012	$ 59,989	$ 10,862	$31,074,072	$11,721,476

New Construction, Maintenance and Repairs

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Appendix II

Gross County Expenditures by Students and Visitors

Estimates are derived for the following categories of student expenditures: Books and Supplies; Real Estate Rental; Boarding, Eating and Drinking; Personal; and Transportation. Most of the cost data for these estimates were provided by M-DCC's Office of Financial Aid, while data on student enrollment were obtained from the Office of Institutional Research.

There were 75,956 unduplicated credit students and 47,130 non-credit students during the academic year 1994-95. Approximately thirty-three percent of the credit students were enrolled full-time (i.e., taking 12 or more credits) during the Fall and Winter Terms. Student expenditures estimates are based on credit students only; therefore, these expenditures are underestimated by the amounts spent by non-credit students.

Expenditures for Books and Supplies

The Office of Financial Aid estimates that full-time students spend around $340 per semester for books and supplies; however, this study assumes that students spend an average of $50 per three-credit course for books and supplies. This works out to $250 per semester, assuming that full-time students take an average of 15 credits. Therefore, part-time students taking 7 to 11 credits (with an average of 9) will spend about $150 per semester, while those taking 6 of less credits (with an average of 3) will spend about $50 per semester.

Appendix Table 2.1 below provides data on credit student enrollment, by semester, by full-time/part-time status.

Appendix Table 2.1
Credit Student Enrollment by Semester by
Full-Time/Part-Time Status
M-DCC, 1994-95

Semester	Credit Students	Full-Time (12+ Credits)	Part-Time (7 - 11 Credits)	Part-Time (6 or Less Credits)
Fall	52,712	17,253	17,091	18,368
Winter	51,491	16,878	16,990	17,623
Spring	35,936	2,211	25,126	8,599
Summer	12,729	5	833	11,891

Source: Closing Term Enrollment Monitoring Reports, Institutional Research, M-DCC.

Applying the semester expenditures estimates on books and supplies to the semester enrollments in Appendix Table 2.1, gross expenditures on books and supplies were estimated at $20.9 million.

Real Estate Expenditures

Real estate expenditures are estimated for the following groups of credit students assumed to be living away from home: (I) all out-of-state (758) and out-of-country (1,944) residents; (iii) 50 percent of Florida non-Dade County residents (697); and (iii) 10 percent of all full-time Dade County residents (2,338)[1](see data in Appendix Table 2.2). Therefore, there were at least 5,737 students incurring rental expenditures in 1994-95.

Appendix Table 2.2
Unduplicated Annual Credit Enrollment by Residency
M-DCC, 1994-95

Residency	Enrollment
Dade County	70,864
Florida Non-Dade County	1,394
Out-of-State	758
Out of Country	1,944
Other Dade County[2]	996
Total	**75,956**

Source: Annual Student Profile. R.R. 95-12R, Table 12, M-DCC, November 1995.

Minimum rental rates are estimated at $350 per student, per month (including utilities), based on advertisements by students and apartment owners. Applying this rate ($4,200 per annum) to 5,737 students, gross rental expenditures were estimated at $24.1 million.

Boarding, Eating and Drinking Expenditures

Boarding expenditures are estimated for full-time credit students living away from home (i.e., 5,737 students). M-DCC's Office of Financial Aid estimates boarding expenditures of $1,748 per student, per year (for dependent students living at home)[3] . Applying this figure to the 5,737 credit students living away from home, boarding expenditures are estimated at $10.0 million.

Eating and drinking expenditures refer essentially to student lunches away from home. Based on a cafeteria survey, M-DCC's Office of Financial Aid estimates a minimum of $4.75 per lunch per day. This results in an average expenditure of $570 per student, per year, assuming luncheon purchases for three days per week and ten months per year. Applying this figure to the 23,385 full-time, Dade County resident credit students, we estimate eating and drinking expenditures at $13.3 million.

Personal Expenditures

Personal expenditures include student expenditures for clothing and toiletries; health insurance; medical and dental services and prescriptions; entertainment, etc. All expenditures, except entertainment, are estimated for students living away from home. Entertainment expenditures are estimated for all full-time credit students.

M-DCC's Office of Financial Aid estimates expenditures of $843 per student, per year for clothing only. Applying this figure to all out-of-state and out-of-country students (2,702

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[1] About 33% of the Fall Term credit students are enrolled full-time. This percentage is applied to the 70,864 Dade County resident credit students to give an estimate of 23,385 full-time students. It is assumed that rental expenditures for most part-time students are not associated with education as the primary activity.

[2] M-DCC employees, spouse/children, and DCPS employees.

[3] A higher figure is estimated for students living away from home; however, the lower figure is used here.

students), and 50% of Florida non-Dade County students (697 students), expenditures for clothing and toiletries are estimated at $2.9 million.

Health insurance is required for out-of-country students only. Based on student information, insurance rates average around $450 per academic year. Applying this rate to 1,944 out-of-country students, health insurance expenditures are estimated at $0.87 million.

M-DCC's Office of Financial Aid estimates expenditures of $218 per student, per year for medical and dental services and prescriptions. Applying this figure to all out-of-state and out-of-country students and 50% of Florida non-Dade County students (3,399 students), medical and dental expenditures are estimated at $0.7 million.

Entertainment and miscellaneous expenditures include student expenditures for athletic events, concerts, movies, etc. These expenditures are estimated by M-DCC's Office of Financial Aid at $310 per student, per year. Applying this figure to all full-time credit students (23,385 students), entertainment expenditures are estimated at $7.2 million.

Transportation Expenditures

Transportation expenditures were estimated for full-time and part-time credit students. It is assumed that full-time students travel to campus an average of three (3) times per week, for sixteen (16) weeks during the Fall and Winter Semesters, and five (5) times per week, for six (6) weeks, during the Spring and Summer Semesters. Part-time students are assumed to travel to campus an average of twice (2) per week during the Fall and Winter Semesters, and Five (5) times per week during the Spring and Summer Semesters.

M-DCC's Office of Financial Aid estimates an average distance of 22 miles to and from campus, based on the observation that the mid-point of major residential areas lay within a radius of eleven miles from the major M-DCC campuses. The authors used a cost rate of 29 cents per mile based on M-DCC's reimbursement rate. Applying these figures to the student semester enrollments in Appendix Table 2.1, transportation expenditures for full-time credit students were estimated at $10.9 million, while expenditures for part-time credit students were estimated at $23.2 million, giving a total of $34.1 million.

Expenditures by Visitors

Visitors to M-DCC provide another source of expenditures which add to the economic impact of the College. These expenditures are associated with visits made by friends and relatives to students and employees at M-DCC; attendees to conferences, seminars, concerts, plays, athletic events and graduation ceremonies sponsored by M-DCC; and visitors to events with outside sponsors such as the Miami International Bookfair, etc. Due to a lack of data, only those expenditures associated with visits to M-DCC students are estimated.

Visitor expenditures are estimated for out-of-country, out-of-state, and 50% of Florida non-Dade County, full-time students. There were 3,399 of these students in 1994-95. Each student is assumed to have had one visitor per year, while each visit is assumed to be an average of one weekend, i.e., two days and two nights.

Hotel and lodging costs per visitor are assumed to average $180, eating and drinking expenses $100, and retail expenses $200. Based on these figures, the following expenditures were estimated for visitors: hotel and lodging, $0.6 million; eating and drinking, $0.3 million; and retail services, $0.7 million.

Appendix III

Gross County Expenditures by Graduates

Many studies have shown that college graduates and leavers (students with some college but no degree) earn higher incomes than high school graduates. M-DCC's economic impact is increased by the additional expenditures associated with the higher incomes of graduates and leavers. Appendix Table 3.1 provides data on the employment and educational status of M-DCC's graduates and leavers during the academic year 1994-95.

Appendix 3.1
M-DCC's Graduates and Leavers, 1994-95

	Graduates[1]			Leavers[4]		
	A.A.	A.S.[4]	Voc.Cert.[4]	A.A.	A.S.	Voc.Cert.
Cont.Educ.	2,254[3]	136	29	952[6]	76	34
Employed	564[3]	854	361	2,221[6]	668	443
Unknown	348[2]	120	36	695[5]	167	187
Total	3,166	1,110	426	3,868[7]	911	664

[1]Some graduates completed dual degrees; therefore, total graduates estimated at 98.9% of completions which were 3,202 for A.A., 1,123 for A.S., and 431 for Vocational Certificates.(Graduate Profile, R.R. No. 95-10R, M-DCC, July 1995).

[2]Eleven percent estimated unknown based on the rate for A.S. graduate unknowns.

[3]Estimates derived from M-DCC's prior reports to the State where 80% of its graduates were in continuing education and 20% employed.

[4]Data compiled from the Florida Education, Training and Placement Information Program (FETPIP).

[5]Eighteen percent estimated unknowns based on the rate for A.S. leaver unknowns.

[6]Estimates derived from prior FETPIP reports where 30% of A.A. leavers were in continuing education and 70% employed.

[7]Estimated on the observed ratio of 55 leavers for every 45 graduates.

Approximately 94% of M-DCC's graduates were Dade County residents (R.R. No. 95-10R, M-DCC, July 1995). Applying this percent to the employed graduates and leavers in Appendix Table 3.1, we can estimate the number of employed graduates and leavers who were also Dade County residents (Appendix Table 3.2).

Some of M-DCC's graduates and leavers who continued their education would have either graduated with a Baccalaureate degree or another associate degree. Follow-up of 1991-92 M-DCC graduates reveal that, of the A.A. and A.S. graduates who continued their education in Florida, 81% were in the State University System (SUS), 8% in Private Universities, and 11% in Community Colleges (many of whom returned to M-DCC) (I.C. No. 93-13C, M-DCC, December 1993). M-DCC's data also reveal that 74% of the A.A. and A.S. leavers in continuing education were in the SUS, 13% in Private Universities, and 13% in Community Colleges (I.C. No. 94-07C, M-DCC, December 1994). Many graduates and leavers continued their education outside of Florida, or could not be located in Florida because of invalid social security numbers.

Appendix Table 3.2
Employed Graduates, Leavers and Transferees From M-DCC Who Were Dade County Residents, and Income Earnings in Excess of High School Graduates, 1994-95

Grads/Leavers	Number Employed	Annual Incomes per Grad[1]	Annual Income Diff. per Grad[4]	Total Annual Income Diff.
M-DCC Graduates				
A.A.	530	$20,148	$7,960	$4.2mill.
A.S.	803	$29,008	$16,820	$13.5 mill.
V.C.	339	$21,492	$9,304	$3.2 mill.
M-DCC Leavers				
A.A.	2,088	$15,396[3]	$3,208	$6.7 mill.
A.S.	628	$15,396[3]	$3,208	$2.0 mill.
V.C.	416	$15,396[3]	$3,208	$1.3 mill.
M-DCC Transfers				
B.A./B.S. Grads.	446	$24,844	$7,960[5]	$3.6 mill.
A.A./A.S. Grads.	146	$24,578[2]	$12,390	$1.8 mill.
H.S. Grads.	---	$12,188	---	---
				$36.3 mill.

[1]Derived from quarterly earnings data provided by FETPIP.
[2]Average of the incomes for A.A. and A.S. graduates.
[3]Estimates by the U.S. Bureau of Census, in 1990, for students with some college, but no degree.
[4]Compared to the incomes of high school graduates.
[5]Difference based on the earnings of M-DCC's A.A. graduates.

Data from the State University System reveal that there were 1,006 graduate transfers from M-DCC and 501 leavers in Fall 1993 (SUS Factbook, 1993-94). Based on the rates in the preceding paragraph, we can estimate that about 99 graduate transferees were in Private Universities, 136 in Community Colleges, and 88 leavers each in Private Universities and Community Colleges. This gives a total of 1,105 graduate transferees and 589 leavers in public and private universities in Fall 1993.

SUS data also reveal a graduation rate of about 28% for Community College transfers in two years. (SUS Factbook, 1994-95). Applying this rate to the 1,694 public and private university transfers, we can estimate that about 474 M-DCC transferees (graduates and leavers) received Baccalaureate degrees from public and private universities in Florida in 1994-95. Again assuming that 94% of these transferees were Dade County residents, 446 resident transferees graduated with Baccalaureate degrees in 1994-95. It is assumed that they were all employed in Dade County.

It was estimated that 136 graduates and 88 leavers transferred to Community Colleges in Florida, giving a total of 224 transferees. It is safe to assume that all of the graduate transferees (136) would have graduated with a second associate degree, if that were the objective, and 22% of the leavers, based in M-DCC's two-year graduation rate. This gives a total of 155 graduates from community colleges who were M-DCC transferees (or completed a second associate degree at M-DCC). Again, assuming a 94% rate for Dade County residents, we estimate that 146 resident

transferees graduated with associate degrees in 1994-95. It is assumed that they were all employed in Dade County.

Appendix Table 3.2 provides estimates of the average annual incomes for graduates and leavers in Florida in 1994-95. Annual earnings data were derived from quarterly earnings data supplied by The Florida Education, Training and Placement Information Program (FETPIP). It is estimated that M-DCC's graduates, leavers and transferees, who were Dade County residents, and assumed to be employed in Dade County, increased incomes in Dade County by $36.3 million, due to their educational experiences at M-DCC.

Appendix IV

Net County Expenditures by the College and Employees

A portion of the gross expenditures associated with M-DCC originated within Dade County; therefore, net expenditure is defined as the gross expenditure minus expenditures which originated from local sources, and is therefore equivalent to expenditures originating outside of Dade County. Consequently, the concept of net impact is the impact associated with net expenditures, and is more closely related to the economic impact measured by Elliott, Levin and Meisel (1988).

In estimating net expenditures, therefore, the task is to remove from college, student and visitor expenditures the amount of funds which originated locally. This exercise is conducted below.

Net College Expenditures

Because of the different multiplier effects, college expenditures were separated into two groups: (1) personnel, current and capital expenses, and (ii) new construction, maintenance and repairs. Most of the funds for new construction maintenance and repairs come from state revenue sources derived from gross receipts tax (Public Education Capital Outlay), while the funds for personnel, current and other capital expenses come from a variety of sources including State, local and federal government. Appendix Table 4.1 provides a summary of M-DCC's sources of revenues for fiscal year 1994-95, and estimates of the amounts originating within Dade County.

Appendix Table 4.1
Sources of Revenue and Amounts
Originating Within Dade County
M-DCC, 1994-95
($Million)

Revenue Source	Amount	Origin Within Dade County	Origin Outside Dade County
Matriculation/Tuition	41.9	34.6	7.3
Other Student Fees	16.5	15.5	1.0
Sales/Services	13.2	12.4	0.8
State Government	146.7	20.1	126.6
Federal Government	46.1	0	46.1
Local Government	3.6	3.6	0
Endowments, Gifts, etc.	15.9	15.9	0
Non-Revenue Receipts	7.9	7.9	0
Total	**291.8**	**110.0**	**181.8**

Source: Schedule of Revenue, Expenditures, and Fund Balance by General Ledger Code (Schedule 1) Annual Financial Report, M-DCC, Fiscal Year 1994-95.

Matriculation and Tuition

Matriculation fees are paid by all Florida resident and non-resident students, while tuition represents additional educational fees paid by non-residents only. Of the $41.9 million in matriculation and tuition revenues, tuition accounted for $4.9 million; therefore, matriculation accounted for $37 million (Schedule 1, Revenue Sources, M-DCC 1994-95).

Schedule 1

Revenue Sources, M-DCC
Fiscal Year 1994-95

COLLEGE: MIAMI-DADE COMMUNITY COLLEGE

SCHEDULE I

SCHEDULE OF REVENUE, EXPENDITURES, AND FUND BALANCE
BY GENERAL LEDGER CODE
FOR THE FISCAL YEAR 1994-95

ACCOUNT TITLE ACCOUNT TITLE		GL CODE CODE	CURRENT FUND UNRESTRICTED UNRESTRICTED	CURRENT FUND RESTRICTED RESTRICTED	AUXILIARY CURRENT CURRENT	LOAN AND ENDOWMENT ENDOWMENT	SCHOLARSHIP RESTRICTED RESTRICTED	UNEXPENDED PLANT PLANT	DEBT SERVICE SERVICE	TOTAL ALL FUNDS ALL FUNDS
STUDENT FEES										
MATRICULATION	ADVANCED & PROFESSIONAL	40110	22,480,342							22,480,342
MATRICULATION	POSTSECONDARY VOCATIONAL	40120	8,063,923							8,063,923
MATRICULATION	POSTSEC. ADULT VOCATIONAL	40130	1,276,388							1,276,388
MATRICULATION	SUPPLEMENTARY VOCATIONAL	40140	546,928							546,928
MATRICULATION	COLLEGE PREPARATORY	40150	4,878,348							4,878,348
MATRICULATION	VOCATIONAL PREPARATORY	40160								0
MATRICULATION	ADULT BASIC & SECONDARY	40190	18,815							18,815
TUITION	ADVANCED & PROFESSIONAL	40310	3,267,509							3,267,509
TUITION	POSTSECONDARY VOCATIONAL	40320	984,659							984,659
TUITION	POSTSEC. ADULT VOCATIONAL	40330	39,566							39,566
TUITION	SUPPLEMENTARY VOCATIONAL	40340	45,384							45,384
TUITION	COLLEGE PREPARATORY	40350	535,648							535,648
TUITION	VOCATIONAL PREPARATORY	40360								0
TUITION	ADULT BASIC & SECONDARY	40390	709							709
SUBTOTAL CCPF STUDENT FEES			41,648,235	0	0	0	0	0	0	41,648,235
LIFELONG LEARNING		40300								0
AVOCATIONAL & RECREATIONAL FEES		40270	1,318,949							1,318,949
LABORATORY FEES		40400	4,383,393							4,383,393
APPLICATION FEES		40500	317,982							317,982
GRADUATION FEES		40600								0
TRANSCRIPTS		40700								0
FINANCIAL AID FUND FEES		40800				223,347	1,854,957			2,078,304
STUDENT ACTIVITY FUND FEES		40850		3,495,020						3,495,020
STUDENT CAPITAL IMPROVEMENT FEE		40890						1,327,156		1,327,156
OTHER STUDENT FEES		40900	3,497,182							3,497,182
SUBTOTAL STUDENT FEES			51,465,741	3,495,020	0	223,347	1,854,957	1,327,156	0	58,366,221
SUPPORT FROM LOCAL GOVERNMENT										
GRANTS & CONTRACTS WITH CITIES		41500								0
GRANTS & CONTRACTS WITH COUNTIES		42000	3,523,825	62,093	14,953					3,600,871
INDIRECT COST RECOVERED - CITY AND COUNTY		41900								0
SUB-TOTAL SUPPORT FROM LOCAL GOVERNMENT			3,523,825	62,093	14,953	0	0	0	0	3,600,871
STATE SUPPORT										
COMMUNITY COLLEGE PROGRAM FUND		42110	85,544,129							85,544,129
SPECIAL STATE APPROP. LIFE LONG LEARNING		42140								0
LICENSE TAG FEES		42210	23,907					112,877	1,457,012	1,593,796
PUBLIC EDUCATION CAPITAL OUTLAY APPROPRIATION		42310						33,627,809		33,627,809
GRANTS & CONTRACTS FROM STATE		42500	1,868,895	1,763,732				437,851		4,070,478
LOTTERY - COMMUNITY COLLEGE PROGRAM FUND		42610	21,320,780	278,120						21,598,900
LOTTERY - LRC MATERIALS		42620								0
LOTTERY - LEARNING AIDS FOR DISABLED		42630								0
LOTTERY - STUDENT DATA BASE		42660								0
INDIRECT COST RECOVERED - STATE		42900	25,448							25,448
SUB-TOTAL STATE SUPPORT			108,783,165	2,041,852	0	0	0	34,378,537	1,457,012	146,661,569

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Schedule I

Revenue Sources, M-DCC
Fiscal Year 1994-95

COLLEGE: MIAMI-DADE COMMUNITY COLLLEGE

SCHEDULE I

SCHEDULE OF REVENUE, EXPENDITURES, AND FUND BALANCE
BY GENERAL LEDGER CODE
FOR THE FISCAL YEAR 1994-95

ACCOUNT TITLE	GL CODE	CURRENT FUND UNRESTRICTED	CURRENT FUND RESTRICTED	AUXILIARY CURRENT	LOAN AND ENDOWMENT	SCHOLARSHIP RESTRICTED	UNEXPENDED PLANT	DEBT SERVICE	TOTAL ALL FUNDS
FEDERAL SUPPORT									
GRANTS AND CONTRACTS FED. GOVERN.	43500		8,195,398	22,292	1,009,534	33,460,248	2,906,983		45,594,453
INDIRECT COST RECOVERED (FEDERAL)	43800	543,277							543,277
SUB-TOTAL FEDERAL SUPPORT		543,277	8,195,398	22,292	1,009,534	33,460,248	2,906,983	0	46,137,730
GIFTS, PRIVATE GRANTS AND CONTRACTS									
GIFTS - INDIVIDUALS	44100								0
GIFTS - CHARITABLE ORGANIZATIONS	44200		1,853,744	18,981		1,813,358			3,686,083
GIFTS - BUSINESS AND INDUSTRY	44300	8,540							8,540
PRIVATE GRANTS & CONTRACTS	44400	710,637	1,521,194	19,075					2,250,906
INDIRECT COSTS RECOVERED - PRIVATE SOURCES	44900								0
SUB-TOTAL GIFTS, PRIVATE GRANTS AND CONTRACTS		719,177	3,374,938	38,056	0	1,813,358	0	0	5,945,529
SALES AND SERVICES DEPARTMENT									
BOOKSTORE SALES AND COMMISSIONS	45000			12,607,793					12,607,793
FOOD SERVICE SALES AND COMMISSIONS	45600								0
HOUSING FEES	46000								0
COMMISSIONS	46200			354,370					354,370
USE OF COLLEGE FACILITIES	46400	65,927							65,927
OTHER SALES AND SERVICES	46600	142,762		64,747					207,509
TAXABLE SALES	46700								0
INTERDEPARTMENTAL SALES	46900								0
SUB-TOTAL SALES AND SVCS. DEPT.		208,689	0	13,026,910	0	0	0	0	13,235,599
ENDOWMENT INCOME		194,903			2,678,699				2,873,602
SUB-TOTAL ENDOWMENT INCOME	47100	194,903	0	0	2,678,699	0	0	0	2,873,602
OTHER REVENUES									
INTEREST AND DIVIDENDS	48100	1,287,151	2,462	72,882	147,825		1,322,566	33,076	2,865,942
GAIN OR LOSS ON INVESTMENTS	48200								0
FINES AND PENALTIES	48700	25,505		9,210	43,790				78,505
OTHER MISCELLANEOUS REVENUES	48900	1,675,862	89,812	189,277	390,649	183,277	1,557,901		4,086,777
SUB-TOTAL OTHER REVENUES		2,988,518	92,274	271,349	582,263	183,277	2,880,467	33,076	7,031,224
NON-REVENUE RECEIPTS									
TRANSFERS IN - MANDATORY	49100		181,510				7,980	996,161	1,185,651
TRANSFERS IN - NON-MANDATORY	49200	6,408,287	268,735	15,000					6,692,022
PROCEEDS - SALE OF FIXED ASSETS	49500	31,511							31,511
PRIOR YEAR CORRECTIONS	49600	100,665	(30,883)	(184,682)	23,782		89,811		18,673
LOAN PRINCIPAL & INTEREST CANCELLATION REIMB.	49700								0
CASH OVER AND SHORT	49900	225		(2,973)					(2,748)
SUB-TOTAL NON-REVENUE RECEIPTS		6,540,688	399,362	(152,655)	23,782	0	97,791	996,161	7,905,109
GRAND TOTAL REVENUES		174,967,980	17,661,937	13,220,905	4,517,805	37,311,838	41,580,934	2,466,249	291,757,651

M-DCC generated 1,164,601 credits in 1994-95. Credits generated by Florida residents totaled 1,111,801, while non-residents generated 52,800 credits (R.R. No. 95-11R, Table 1, I.R., M-DCC, Sept. 1995). Credits by Florida residents, therefore, comprised 95.5% of M-DCC's total credits. Applying this rate to matriculation revenues, it is estimated that Florida residents accounted for $35.3 million of the matriculation revenues.

Data in Appendix Table 2.2 reveal that Dade County residents (71,860) accounted for 98.1% of Florida residents (73,254) in 1994-95. Applying this rate to matriculation revenues, it is estimated that $34.6 million of matriculation revenues originated within Dade County.

Other Student Fees

Other student fees totaled $16.5 million in 1994-95. These fees are composed of student activity and capital improvement fees, financial aid fees, etc. Fees for Lifelong Learning and Recreational and Leisure courses are also included in this category. Applying the 95.5% rate to these fees, the Florida resident component is estimated to be $15.8 million. Applying the 98.1% rate to the Florida resident component, it is estimated that Dade County residents accounted for $15.5 million in other student fees.

Sales and Services

Sales and services totaled $13.2 million in 1994-95. Most of the revenues came from bookstore sales ($12.6 million); therefore, we can apply the 95.5% rate to sales and services to estimate the Florida resident component at $12.6 million. Applying the 98.1% rate to the Florida resident component, it is estimated that Dade County residents accounted for $12.4 million in sales and services.

State, Federal and Local Government

It is reasonable to assume that all revenues from local government originated in Dade County. On the other hand, some of the State revenues would have originated locally through taxes and lottery sales.

In 1994-95, M-DCC received $146.7 million in State revenues. Also, tax collections in the State of Florida (excluding gasoline taxes) were $11.6 billion, while lottery sales were $2.3 billion, giving a combined total of $13.9 billion. Tax collections from Dade County were $1.5 billion, while lottery sales were $0.4 billion, giving a combined total of 1.9 billion (Florida Statistical Abstract, 1995 and 1996). About 13.7% of Florida's State taxes and lottery were therefore collected in Dade County. Assuming that this proportion of M-DCC's revenues from State Government originated within Dade County, it is estimated that $20.1 million of State revenues originated within Dade County.

Similar data were not readily available to permit an analysis of the percent of Federal revenues originating within Dade County. It is therefore assumed that all of the federal revenues originated externally.

Endowments, Gifts and Non-Revenue Receipts

Revenues from endowments, gifts and grants, contracts, interest and dividends, and other non-revenue receipts are assumed to have originated locally.

The data in Appendix Table 4.1 reveal that of the $291.8 million in M-DCC expenditures, $110 million, or 37.7% originated locally. Referring to Table 1 (Gross and Net Impacts on Output), it can be assumed that 37.7% of the Gross County Expenditures would have originated locally, i.e., $72.2 million of the Personnel, Current and Capital Outlay. Therefore, County Expenditures for Personnel, Current and Capital Outlay are estimated at $118.9 million. Since most the funds for New Construction, Maintenance and Repairs are obtained externally, this study will assume that expenditures from local sources were zero. Therefore, Net County Expenditures for New Construction were the same as Gross County Expenditures, i.e., $17.7 million.

Appendix V

Net County Expenditures by Students, Visitors and Graduates

In estimating Net Expenditures by Students, Visitors and Graduates, we are in effect attempting to remove expenditures associated with Dade County residents.

Books and Supplies

Gross expenditures on books and supplies ($20.9 million) were estimated for full-time and part-time credit students. Applying the 95.5% rate gives an estimated of $20.0 million for Florida residents. Applying the 98.1% rate gives an estimate of $19.6 million for Dade County residents. Net county expenditures for books and supplies were therefore $1.3 million.

Rental Real Estate

Gross real estate rental expenditures were $24.7 million. Ten percent (10%) of Dade County residents (2,338 students) were included in the estimate of real estate rental expenditures. At an annual cost of $4,200 per student, expenditures by Dade County residents are estimated at $9.8 million. Net county real estate expenditures were therefore $14.9 million.

Boarding, Eating and Drinking Expenditures

Gross boarding expenditures were estimated at $10.0 million. Again, 2,338 Dade County residents were included in this estimated. At an annual cost of $1,748 per student, boarding expenditures by Dade County residents were $4.1 million. Net county boarding expenditures were therefore $5.9 million.

Gross expenditures for eating and drinking ($13.3 million), were estimated for all full-time credit students. Applying the 95.5% rate for Florida residents gives an estimate of $12.7 million. Applying the 98.1% rate for Dade County residents gives an estimate of $12.5 million. Net Country expenditures for eating and drinking were therefore $0.8 million.

Personal Expenditures

Dade County residents were only included in the entertainment expenditures estimated at $7.2 million. Applying the 95.5% rate gives an estimate of $6.9 million for Florida residents. Applying the 98.1% rate gives an estimate of $6.7 million for Dade County residents. Net County expenditures for entertainment were therefore $0.5 million.

Transportation Expenditures

Gross transportation expenditures of $34.1 million were estimated for full-time and part-time credit students. Applying the 95.5% rate gives an estimate of $32.6 million for Florida residents. Applying the 98.1% rate gives an estimate of $31.9 million for Dade County residents. Net county transportation expenditures were therefore $2.2 million.

Visitors Expenditures

Dade County residents were not included in the estimates for visitor expenditures.

Graduate Expenditures

All graduate expenditures were estimated for Dade County residents only; therefore, these expenditures are eliminated in deriving Net County Expenditures.

Appendix VI
Bureau of Economic Analysis
Input/Output Industry Codes for
Types of Expenditures

Types of Expenditures	BEA Input/Output Industry No.
College Expenditures	
Personnel, Current & Capital Expenses	(77.0402)
New Construction, Maintenance & Repairs	(11.0000)
Student Expenditures	
Books & Supplies	(69.0200)
Rental Real Estate	(71.0201)
Boarding, Eating, Drinking	(74.0000)
Transportation	(65.0200)
Personal	
Clothing/Toiletries	(69.0200)
Health Insurance	(70.0500)
Medical/Dental	(77.0100)
Entertainment	(76.0101)
Visitor Expenditures	
Hotel and Lodging	(72.0100)
Eating and Drinking	(74.0000)
	(69.0200)
Graduate Expenditures	**(91.0000)**

GLOSSARY

Actual vs. County Expenditures

- In this study, the difference between Actual and County Expenditures applies only to College Expenditures, since the other categories of expenditures (Students, Visitors and Graduates) were estimated at the county level only.

- Actual College Expenditures refer to the total expenditures made by the college as reported in the Annual Financial Reports. Some of these expenditures were made outside of the county; therefore, County Expenditures refer to the proportion of Actual Expenditures that remained within the county.

Gross vs. Net County Expenditures

- Gross County Expenditures refer to the total expenditures made by the college, students, visitors and graduates within the county. The sources of funds for some of these expenditures originated within the county; therefore, Net County Expenditures are equal to the Gross County Expenditures minus Expenditures of funds originating within the county. In other words, Net County Expenditures refer to the expenditures of funds originating outside of the county.

Output, Income and Employment Multipliers

- The Output Multiplier represents the total dollar change in the output of all industries for each additional dollar of expenditure on the associated good or service.

- The Income Multiplier represents the total dollar change in the earnings of households employed by all industries for each additional dollar of expenditure on the associated good or service.

- The Employment Multiplier represents the total change in the number of jobs in all industries for each additional one million dollars of expenditure on the associated good or service.

Gross and Net County Impacts

- The Gross County Impact represents the total economic impact of expenditures originating within and outside of the county. It is the product of the gross county expenditures and the respective multipliers.

- The Net County Impact represents the total economic impact of expenditures originating outside of the county only. It is the product of the net county expenditures and the respective multipliers.

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